

Claim 13 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Murakami, et al. (U.S. Patent Re. 35,104) in view of Acampora et al. (U.S. Patent 5,148,272) further in view of Sie et al. (U.S. Patent 5,534,941). Claims 15-16, 21-28, 35-39, 41 and 44-45 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Murakami, et al. (U.S. Patent Re. 35,104) in view of of Sie et al. (U.S. Patent 5,534,941) further in view of Acampora et al. (U.S. Patent 5,148,272). Applicants respectfully traverse the rejection of these claims for the reasons set forth below.

A. CLAIMS 1 AND 18

Claims 1 and 18 are directed to an information processing apparatus and method in which error detection or correction encoding is performed on at least a portion in a header (in information to be distributed) with higher redundancy than an entity in the information to be distributed. The information to be distributed encoded by said encoding means is multiplexed in a broadcast signal, and the multiplexed signal is transmitted.

As acknowledged by the Examiner, Murakami does not disclose or suggest any error detection or correction encoding being performed on at least a portion in a header with higher redundancy than an entity in the information to be distributed.

The Examiner asserts that the above limitation is shown by Sie which states:

Circuits 510-1 to 510-n segment the processed bit streams into appropriate packets and place appropriate linking or "tagging" information in a header at the beginning of each packet. This tagging information provides the correspondence between a given data stream and a channel number, and is used at the home receiving site to route and combine the various audio and text (data) signals with each other and optionally with the active video channel. . . . In this embodiment, encoder 520 is, for example, a General

Intstruments DigiCipher II or other MPEG II compatible encoder, including modulator 560 and forward error correction capability.

(Sie, col. 8, lines 14-34). However, the cited portion of Sie simply discusses placing tagging information in a header of each packet to provide the correspondence between a given data stream and a channel number for use at the receiving site to route and combine the various signals. Sie is silent as to any error detection or correction encoding being performed on at least a portion in a header with higher redundancy than an entity in the information to be distributed.

Accordingly, claims 1 and 18 and their dependent claims are believed to be patentably distinguishable over the cited references. Reconsideration and withdrawal of the rejection of these claims are respectfully requested.

B. CLAIMS 8 AND 19

Similarly, claims 8 and 19 are directed to an information processing apparatus and method in which the information to be distributed is multiplexed in a broadcast signal and the multiplexed signal is transmitted. A portion of a header in the information to be distributed is transmitted at least a plurality of number of times while an entity in the information to be distributed is transmitted.

For similar reasons as discussed above for claims 1 and 18, claims 8 and 19 and their dependent claims are also believed to be patentably distinguishable over the cited reference. Reconsideration and withdrawal of the rejection of these claims are respectfully requested.

C. CLAIMS 12 AND 20

Claims 12 and 20 are directed to an information processing apparatus and method in which the information to be distributed encoded by said encoding means is multiplexed in a broadcast signal, and the multiplexed signal is transmitted. A plurality of kinds of information are able to be transmitted as an entity in the information to be distributed, and different error detection or correction ability are used by the encoding means/step in correspondence to the kinds of information to be distributed.

As acknowledged by the Examiner, Murakami does not disclose or suggest a plurality of kinds of information being able to be transmitted as an entity in the information to be distributed, and the encoding means using different error detection or correction ability in correspondence with the kind of information. The Examiner asserts that the above limitations are taught by Acompora (e.g., col. 13 lines 40-43 and 47-49, Fig. 8).

However, the portions of Acompora (Fig. 8), relied upon by the Examiner, describe circuitry of the transport processor 25 (Fig. 1) which resides on the reception side in which decoding, not encoding, is performed. The transport processor 25 detects error in a received transport block, and passes an error signal along with the transport block to an appropriate one of the audio, auxiliary or video signal processing paths, such as for use in error concealment. As such, Acompora is simply silent as to any encoding means/step using different error detection or correction ability in correspondence with the kind of information to be distributed.

Accordingly, claims 12 and 20 and their dependent claims therefrom are believed to be patentably distinguishable over the cited reference. Reconsideration and withdrawal of the rejection of these claims are respectfully requested.

D. CLAIMS 15 AND 21

Claims 15 and 21 are directed to an information processing apparatus and method in which the information to be distributed is multiplexed in a broadcast signal and the multiplexed signal is transmitted. The information to be distributed is transmitted as an entity in a data format used for multiplexing another information in a description format, which is not used in the multimedia network, in an FM audio signal, and in which the data format forms an error correction code and a header of the information to be distributed forms an error correction code that is different from the error correction code formed from the data format.

As acknowledged by the Examiner, Murakami and Sie do not disclose or suggest a header of the information to be distributed forming an error correction code that is different from the error correction code formed from the data format. The Examiner asserts that the above feature is taught by Acampora. However, as discussed above for claims 12 and 20, the portions of Acampora (Fig. 8), relied upon by the Examiner, describe circuitry of the transport processor 25 (Fig. 1) which resides on the reception side in which de-multiplexing, not multiplexing is performed. The transport processor 25 detects error in a received transport block, and passes an error signal along with respective transport block to an appropriate one of the audio, auxiliary or video signal processing paths, such as for use in error concealment. As such, Acampora is silent as to

a header of the information to be distributed forming an error correction code that is different from the error correction code formed from the data format.

Furthermore, none of the cited references discloses or suggest transmission of information to be distributed in a data format used for multiplexing another information in a description format in an FM audio signal. The Examiner asserts that Sie (col. 3, lines 63-64 and col. 6, lines 5-9) teaches the above-noted limitation. However, those portions of Sie simply refer to the utilization of a single analog video channel bandwidth to provide a user with a plurality of screens which include the active video picture along with other screens which display only audio or text/graphic. Sie is silent as to transmission of information to be distributed in a data format used for multiplexing another information in a description format in an FM audio signal.

Additionally, none of the cited references discloses or suggests information being transmitted as an entity in a data format used for multiplexing another information in a description format that is not used in a multimedia network. The Examiner has not addressed this limitation in the Office Action.

Thus, claims 15 and 21 and their dependent claims are believed to be patentably distinguishable over the cited references. Reconsideration and withdrawal of the rejection of these claims are respectfully requested.

E. CLAIMS 22 AND 38

Claims 22 and 38 are directed to an information processing apparatus and method in which a broadcast signal is received. The broadcast signal is obtained by multiplexing information to be distributed in a description format used in a multimedia

network and an error correction or detection check code added for at least partial information of the information to be distributed, as an entity of a data format which is used for multiplexing predetermined information in an FM audio signal and includes an error correction check code. Error correction or detection processing of the information to be distributed is performed using the error correction or detection check code. The processing is executed based on the error correction check code and based on the error correction or detection check code at different timings.

As discussed above for claims 15 and 21, the cited references do not disclose or suggest multiplexing information in a data format used for multiplexing predetermined information in an FM audio signal.

As to the processing based on error correction or detection check code at “different timings,” the Examiner relies on col. 13, lines 37-43 of Acampora. However, Acampora, as relied upon by the Examiner, simply shows an error detection process in which, at the decoder of the receiving system, the transport data is applied to an FCS ERROR detector 250 and a delay element 251. The delay element 251 provides a delay of one transport block interval to allow the detector 250 to determine if any errors are present in the corresponding transport block. Acampora is silent as to any error correction or detection check code being added to the information to be distributed, or any processing based on such check codes at different timings.

Thus, claims 22 and 38 and their dependent claims are believed to be patentably distinguishable over the cited references. Reconsideration and withdrawal of the rejection of these claims are respectfully requested.

F. CLAIMS 30 AND 39

Claims 30 and 39 are directed to an information processing apparatus and method in which a broadcast signal is received. The broadcast signal is obtained by multiplexing information to be distributed in a description format, used in a multimedia network, as an entity of a data format used for multiplexing predetermined information in an FM audio signal. The information to be distributed is stored, and it is informed that the received information to be distributed is stored in said storage means and has not been output to an external device.

As discussed above for claims 15 and 21, the cited references do not disclose or suggest multiplexing information in a data format used for multiplexing predetermined information in an FM audio signal.

As to the storing and informing limitations, the Examiner relies on col. 6, lines 54-60 of Sie. However, Sie, as relied upon by the Examiner, states:

Mapping function 155 is applied via path 472 to memory 488. Processor 480 controls channel assignment controller 485 in accordance with mapping function 155 to determine the correspondence between Active Video Channel Vi input on channel 450 and video outputs 462-* by sending appropriate switching information to video switch SW2.

In other words, at the decoder, the channels are assigned to the appropriate channel modulators according to the mapping function. Sie is silent as to any storing of the data on the received channel(s) or any informing that the received data is stored and has not been output to an external device. Thus, Sie does not disclose or suggest any storing of information to be distributed received in the multiplexed broadcast signal, or any informing thereof.

Thus, claims 30 and 39 and their dependent claims are believed to be patentably distinguishable over the cited reference. Reconsideration and withdrawal of the rejection of these claims are respectfully requested.

G. CLAIMS 35 AND 41

Claims 35 and 41 are directed to an information processing apparatus and method in which a broadcast signal is received. The broadcast signal is obtained by multiplexing information to be distributed in a description format, used in a multimedia network, as an entity of a data format used for multiplexing character information in an FM audio signal. The information to be distributed is stored. A command is executable for displaying the stored information, and a command is executable for outputting the stored information to an external device, at different timings.

As discussed above for claims 15 and 21, the cited references do not disclose or suggest multiplexing information in a data format used for multiplexing character information in an FM audio format. Also, as discussed above for claims 32 and 40, none of the references discloses or suggests the claimed storing and displaying of such stored information.

Furthermore, the cited references do not disclose or suggest any executable command for outputting the stored information to an external device, at different timings. The Examiner has not specifically indicated where such a limitation is taught in the cited references, and it is believed that the cited references are silent as to such limitation.

Thus, claims 35 and 41 are believed to be patentably distinguishable over the cited references. Reconsideration and withdrawal of the rejection of these claims are respectfully requested.

H. CLAIMS 42 AND 48

Claims 42 and 48 are directed to an information processing apparatus and method involving a) inputting information data, and a check code for correcting an error of the information data; b) detection means for detecting an error state of the information data; c) setting an allowable error state of the information data; and d) controlling processing for the information data input by said input means in accordance with outputs from said setting means and said detection means.

As acknowledged by the Examiner, Murakami does not disclose or suggest any setting of an allowable error state of the information data and, accordingly, any controlling of processing for the information data input by said input means in accordance with outputs from said setting means and said detection means.

Acampora, as relied upon by the Examiner, does not remedy the deficiencies in the Murakami teaching. In particular, Acampora states:

If it is assumed that error concealment by repeating information from frame-to-frame is acceptable, in the video signal processing path the error signal may be utilized to simply excise transport blocks with detected errors from the video data stream. Alternatively, for more sophisticated error concealment the transport block data may be retained but tagged with the error indication to alert the decompressor to perform alternative error concealment functions.

The cited portions of Acampora simply discuss various ways in which error concealment may be performed using the error signal generated by the decoder subsystem. Acampora is silent as to any usage of an error rate or any setting of such a rate, as well as any

controlling of processing for the information data input in accordance with the set allowable error rate.

Thus, claims 42 and 48 are believed to be patentably distinguishable over the cited references. Reconsideration and withdrawal of the rejection of these claims are respectfully requested.

III. Objection to Claims 4, 6, 10-11, 14, 17, 29, 31 and 46

The Examiner has objected to claims 4, 6, 10-11, 14, 17, 29, 31 and 46 as being dependent upon a rejected base claim but would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims. As base claims 1, 8, 14, 15, 22, 30 and 42 are believed to be allowable, reconsideration and withdrawal of the objection of these claims are respectfully requested.

CONCLUSION

Based on the foregoing remarks, Applicants respectfully request reconsideration and withdrawal of the objection of the Abstract and the rejection of claims 1-48 and allowance of this application.

AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees which may be required for consideration of this Amendment to Deposit Account No. 13-4503, Order No. 1232-4450. A DUPLICATE OF THIS DOCUMENT IS ATTACHED.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. 13-4503, Order No. 1232-4450. A DUPLICATE OF THIS DOCUMENT IS ATTACHED.

Respectfully submitted,
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